

Fig. 1a

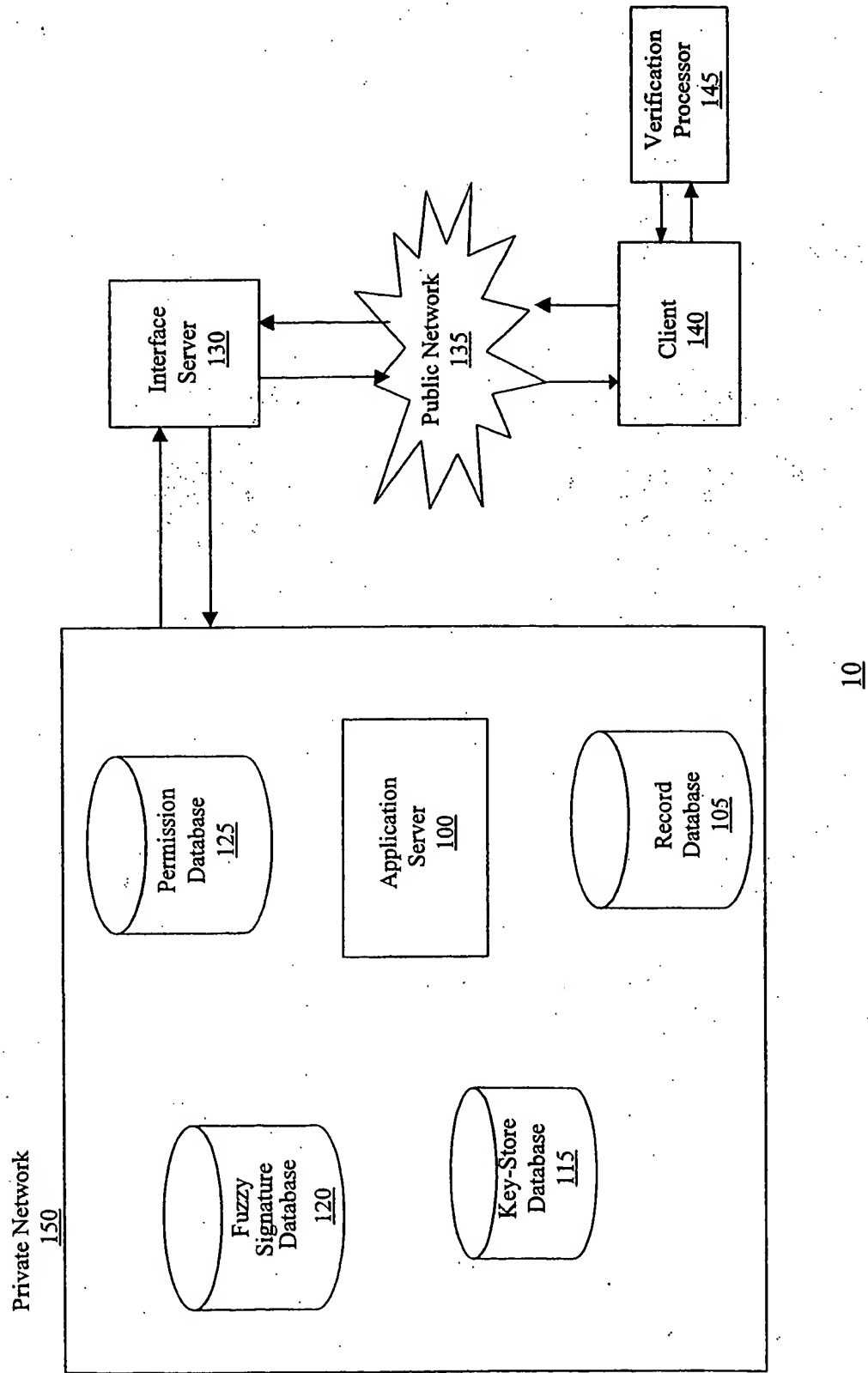
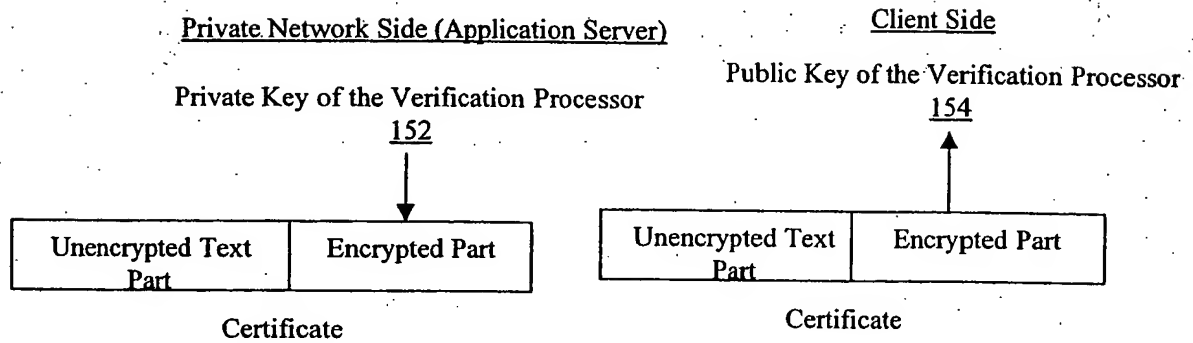


Fig. 1b

Keys Used for Authenticating the  
Interface Server



Key:    ↓ = Encryption    ↑ = Decryption

Fig. 1c

Keys Used in Transmitting, Receiving,  
and Storing Data

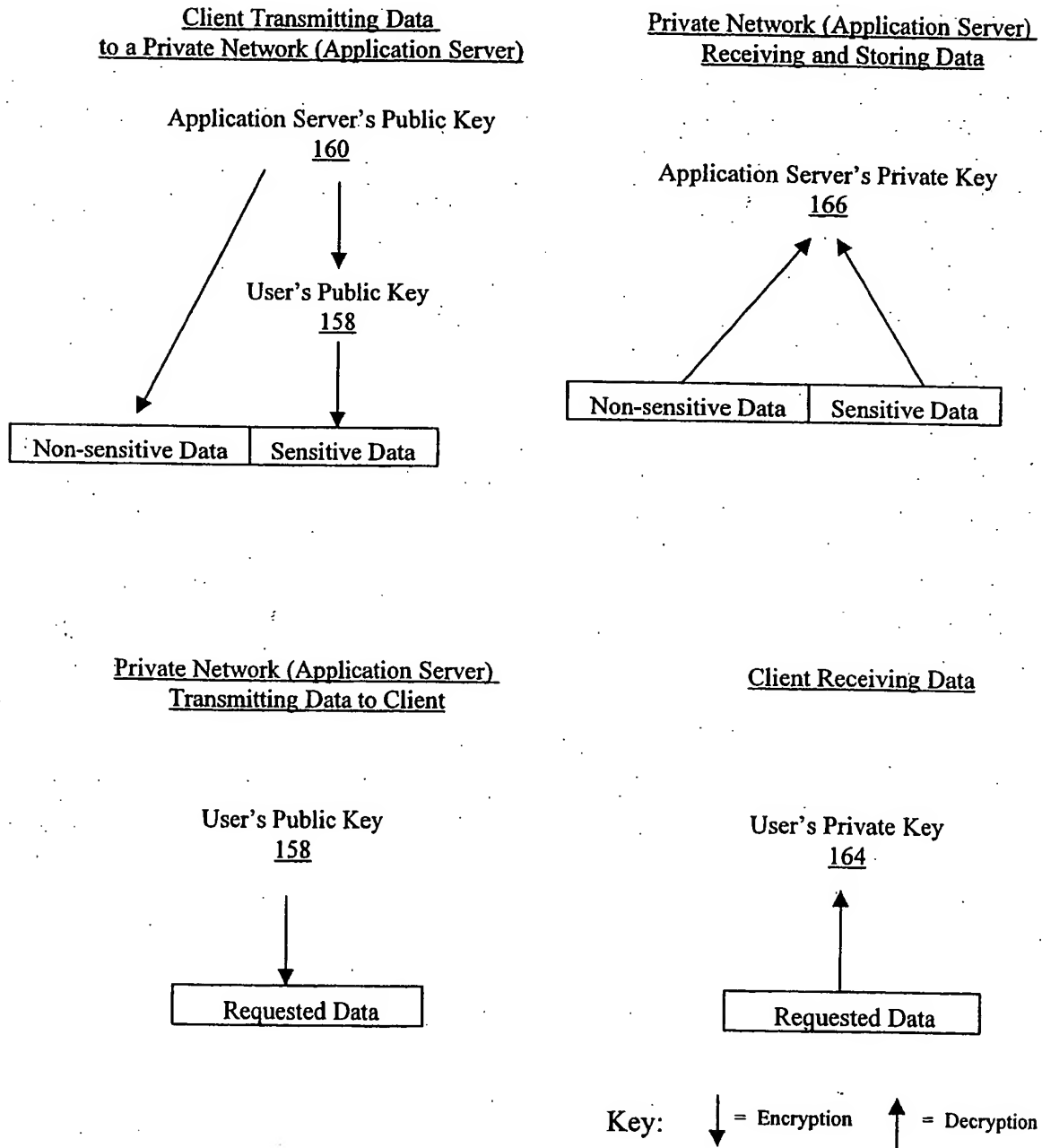
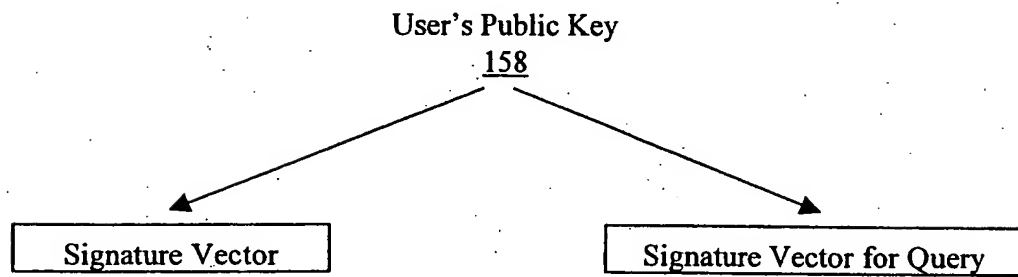


Fig. 1d

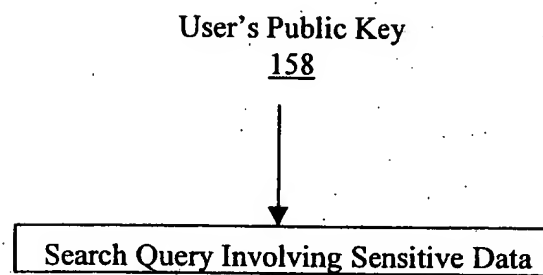
Keys Utilized in Fuzzy Searching



Key:    ↓ = Encryption    ↑ = Decryption

Fig. 1e

Keys Utilized in Relational Database Searching

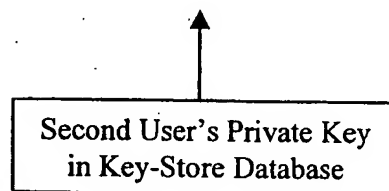


Key:    ↓ = Encryption    ↑ = Decryption

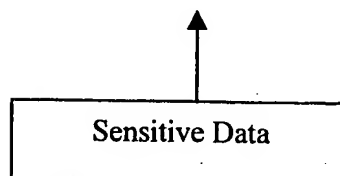
Fig. 1f

Keys Utilized in Accessing Sensitive Data

First User's Key-Store Master Key  
168



Second User's Private Key  
164



Key:    ↓ = Encryption    ↑ = Decryption

Fig. 1h

Steps for Communications between a Client and a Private Network

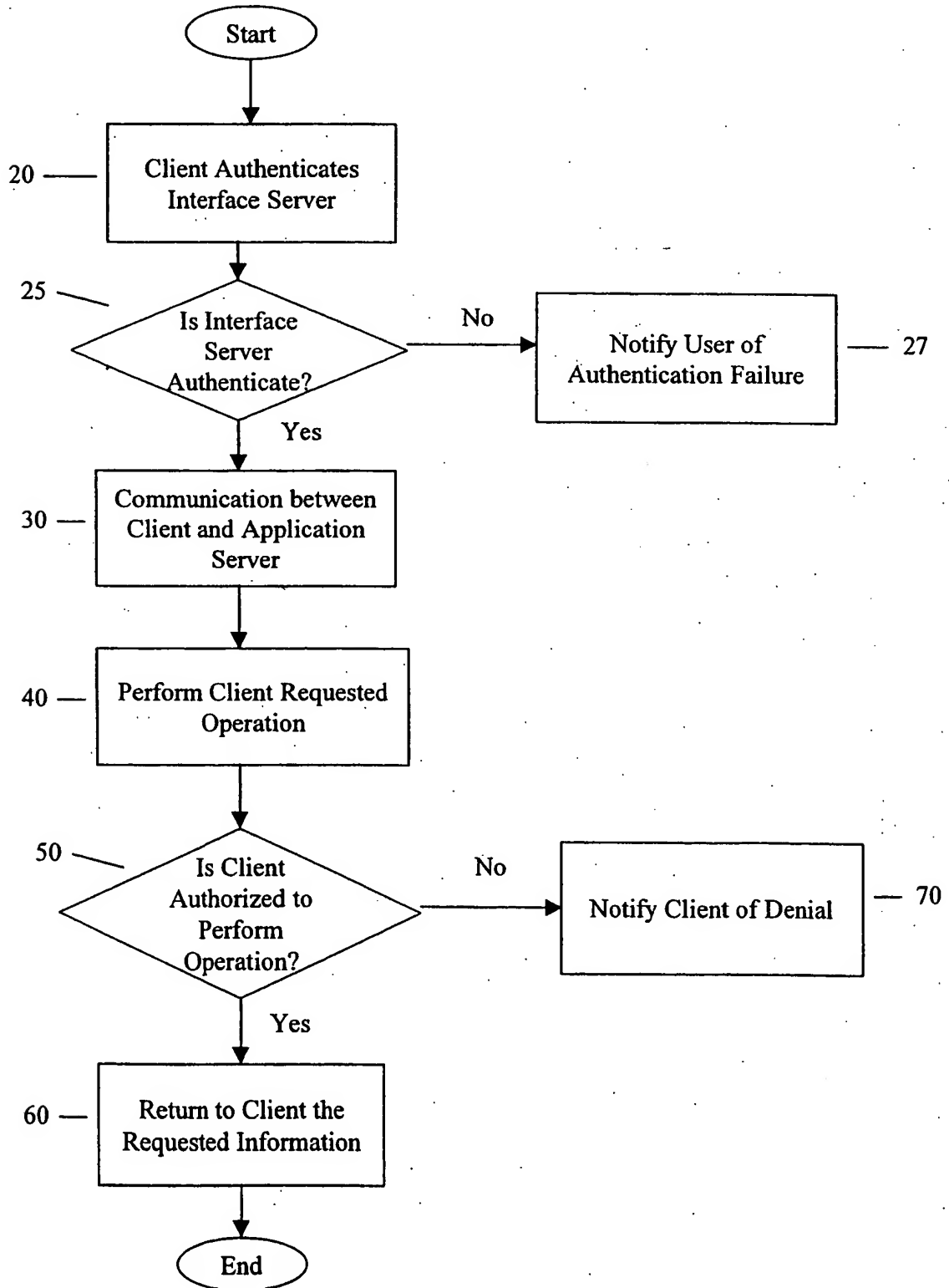


Fig. 2

Authentication

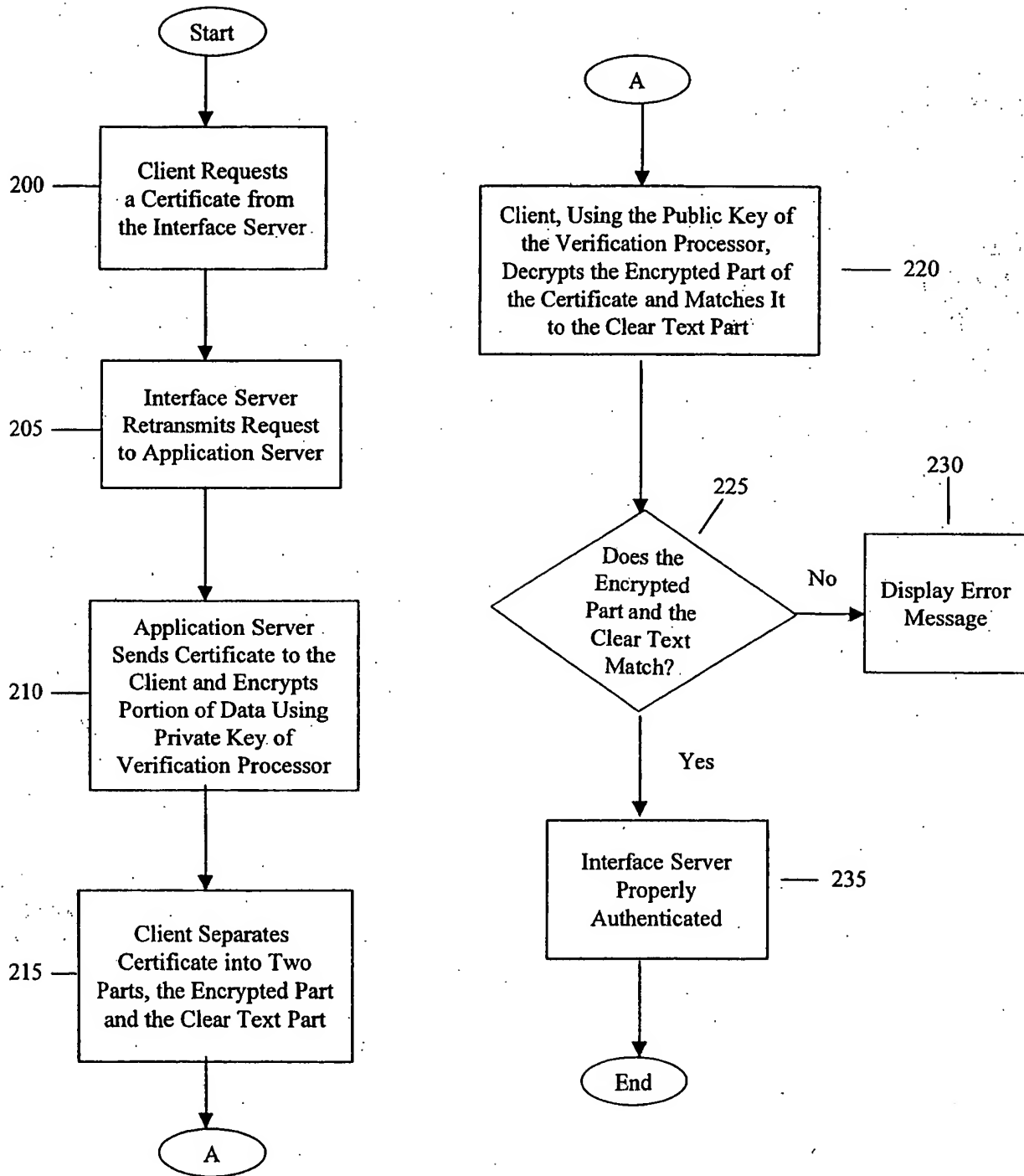




Fig. 3

Transmission and Storage of Data

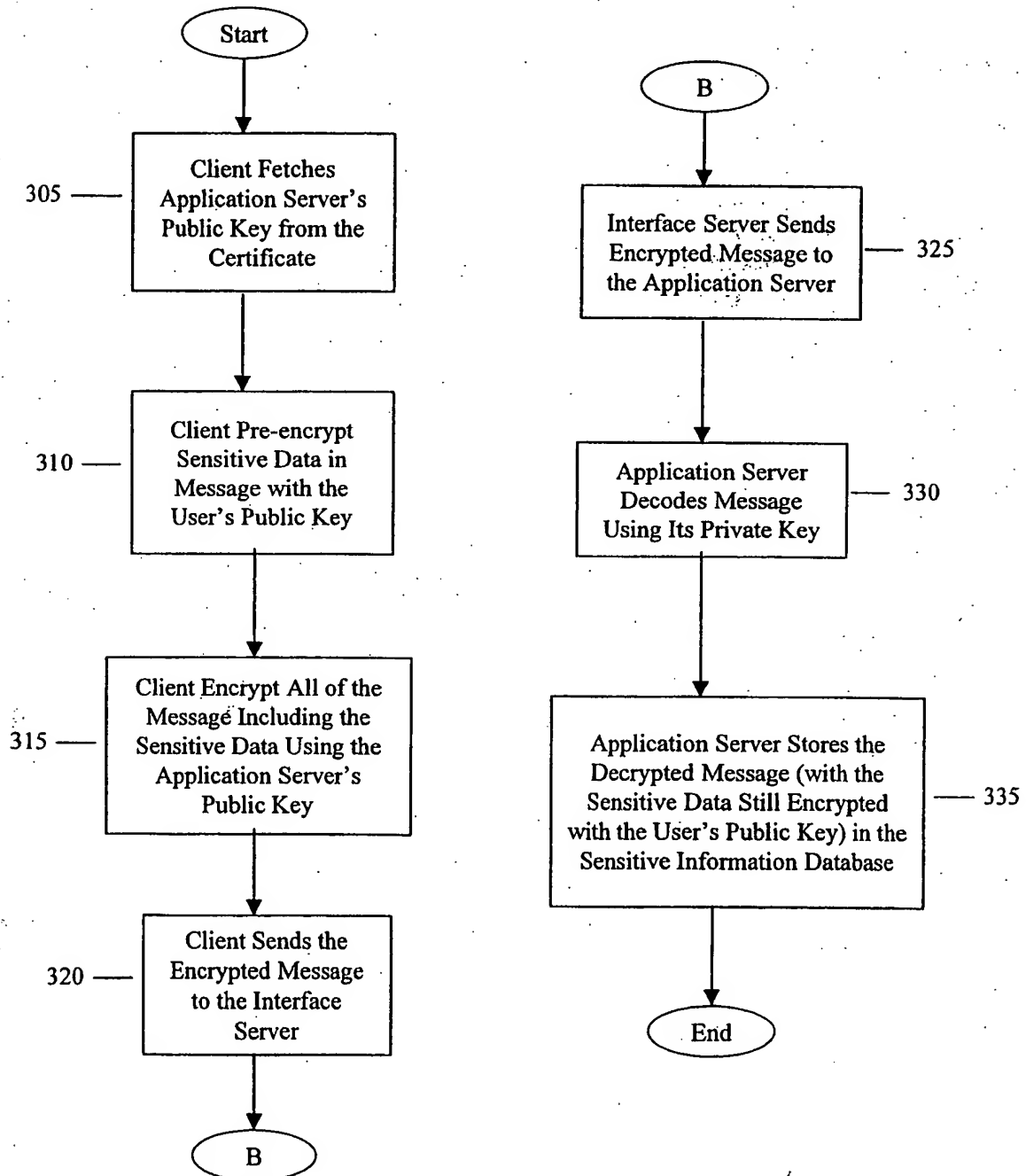
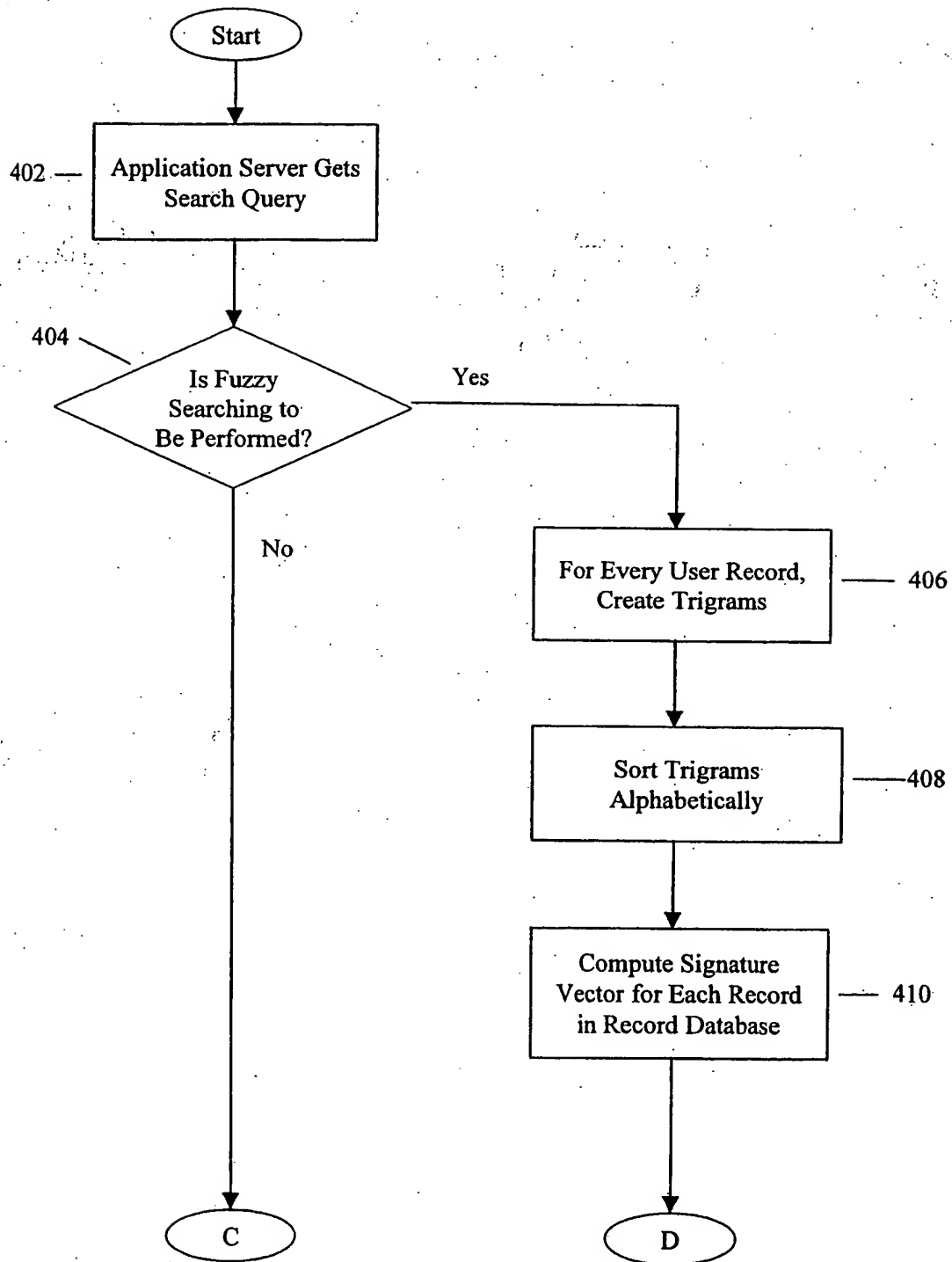


Fig. 4

Search Operation



**Fig. 4**

**Search Operation**

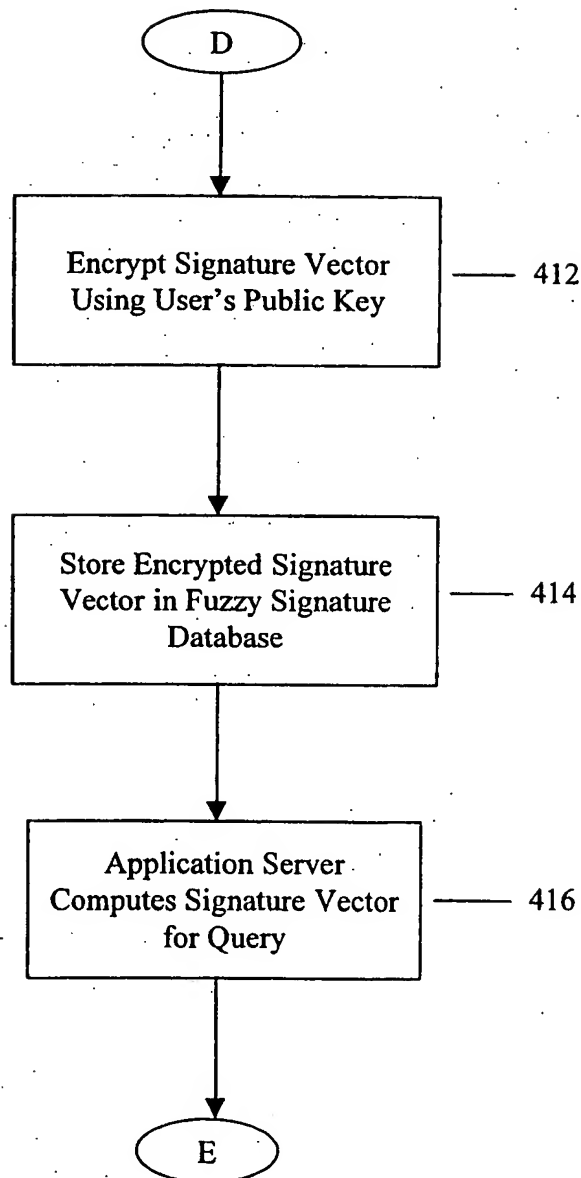


Fig. 4

Search Operation

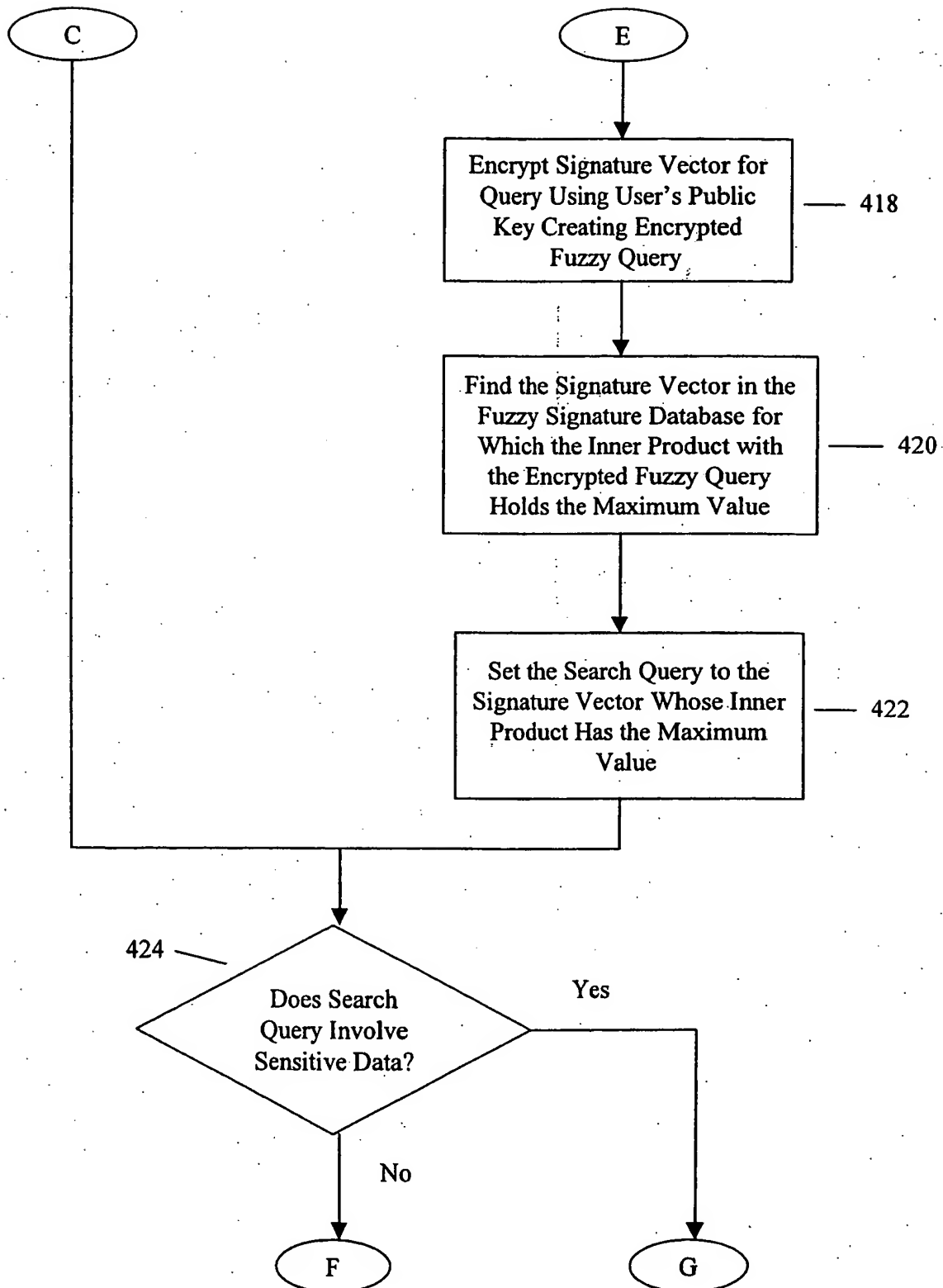
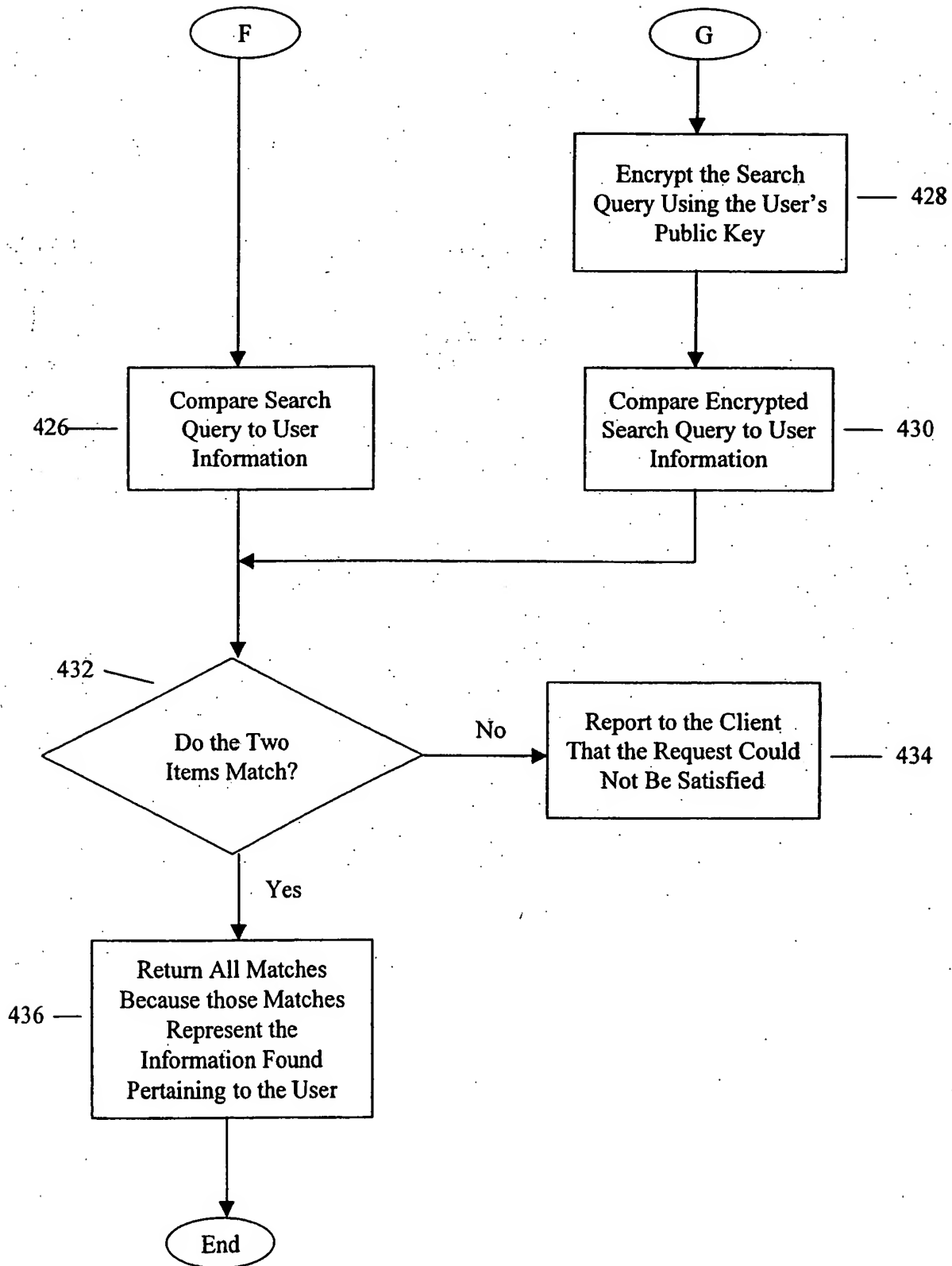


Fig. 4

Search Operation



**Fig. 5**  
**Accessing Sensitive Data**

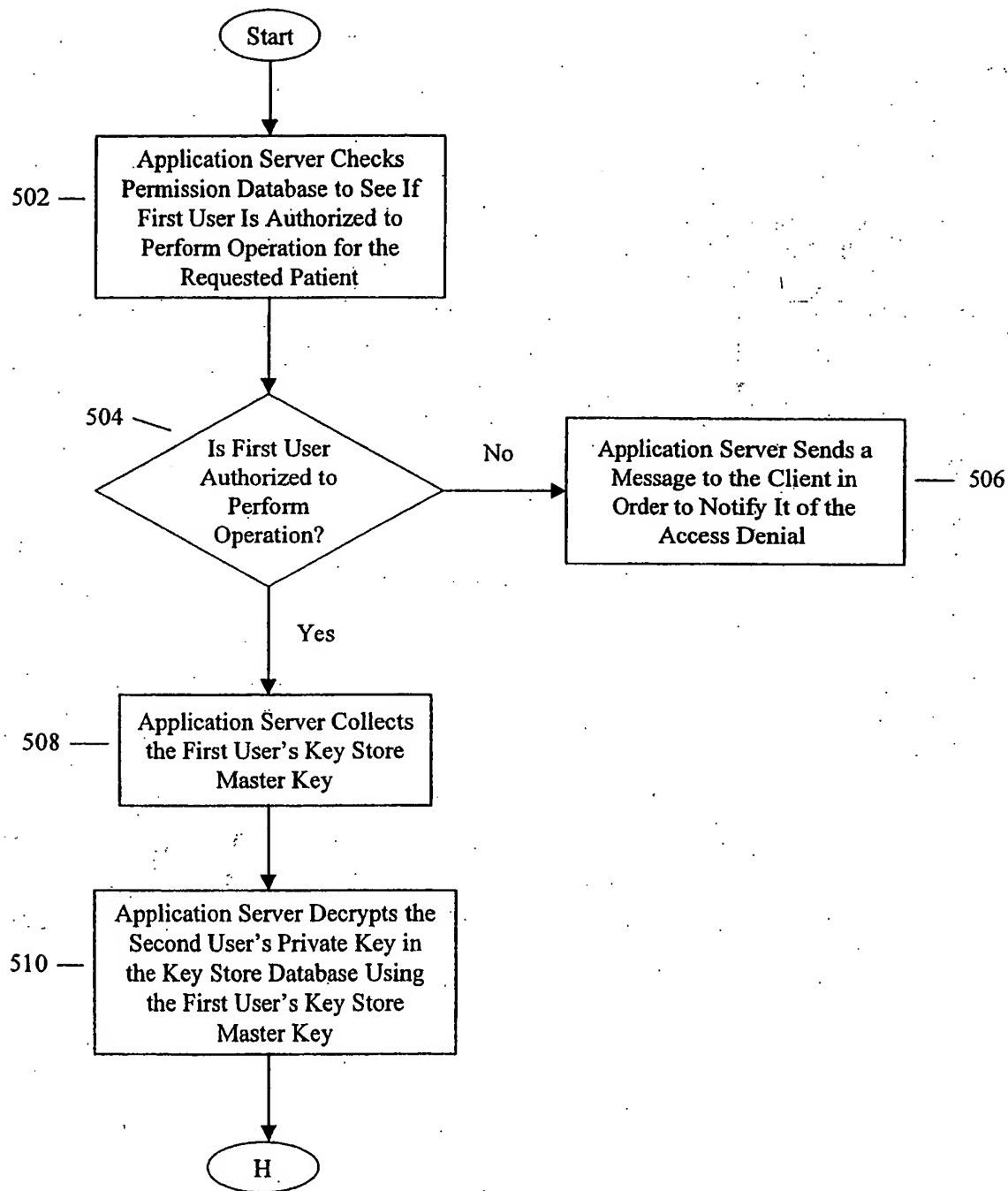


Fig. 5

Accessing Sensitive Data (Cont.)

